

Abstract

The invention relates to a method for the nondestructive and contact-free detection of faults in a test specimen (13) which is moved, at a speed (v), relative to a probe (14) that is characterized by an effective width (WB), the probe being used to detect a periodic electrical signal which has a carrier oscillation whose amplitude and/or phase is/are modulated by a fault (15) in the test specimen, the probe signal being filtered and being sampled by means of a triggerable A/D converter stage (35) in order to obtain a demodulated digital measurement signal which is filtered using a digital frequency-selective adjustable second filter unit (52) in order to obtain a useful signal which is evaluated in order to detect a fault in the test specimen, the A/D converter stage being triggered at an n th integer fraction of the frequency of the carrier oscillation, n being selected as a function of the fault frequency which is obtained as the quotient of the relative speed between the test specimen and the probe and the effective width of the probe, and the frequency-selective second filter unit being adjusted as a function of the fault frequency.

(Fig. 1)